
Contents

Introduction	1
--------------------	---

CHAPTER 1

THE CONCEPT OF NATURE: A PSYCHOLOGIST'S VIEW

JOACHIM F. WOHLWILL

Introduction	5
Some Definitional Problems	6
Boundary-Line Problems	7
Toward a Perceptually Based Ecology of Natural Environments. .	12
The Simulation of the Natural Realm	19
Alternative Views of Nature in Psychological Terms	21
Nature as a Realm of Continuous Change and Growth	22
Nature as a Refuge	23
Nature as a Symbol	26
Conclusion: Nature as a "Natural" Category	30
The Developmental Origins of the Natural/Artificial Differentiation	30
A Program of Research on the Perceptual, Cognitive, and Affective Components of the Nature Concept	32
A Final Comment	34
References	35

CHAPTER 2

METHODOLOGICAL ISSUES IN THE ASSESSMENT OF
LANDSCAPE QUALITYTERRY C. DANIEL
JOANNE VINING

Introduction.....	39
Landscape Quality.....	41
Landscape-Assessment Models.....	43
Ecological Model.....	44
Example.....	45
Evaluation.....	47
Formal Aesthetic Model.....	49
Example.....	50
Evaluation.....	51
Psychophysical Model.....	56
Example.....	58
Evaluation.....	61
Psychological Model.....	65
Example.....	67
Evaluation.....	68
Phenomenological Model.....	72
Example.....	73
Evaluation.....	74
Conclusion.....	76
References.....	80

CHAPTER 3

AESTHETIC AND AFFECTIVE RESPONSE TO NATURAL
ENVIRONMENT

ROGER S. ULRICH

Introduction.....	85
Defining Affective and Aesthetic Response.....	86
Toward a Theory of Affective Response to Natural Environment.....	88
Generating Affects: Feelings Precede Thoughts.....	88

A Psychoevolutionary Framework	89
Affects and Behavior in Natural Environments	93
Visual Properties Influencing Aesthetic Preference and Interest	95
Complexity	95
Structural Properties	97
Depth	100
Ground Surface Texture	101
Threat/Tension	102
Deflected Vistas	103
Water	104
Summary of Visual Properties Influencing Preference	105
Extent of Agreement among Observers for Preference	106
Cultural Influences on Aesthetic Preference	107
Aesthetic Response to Natural versus Built Environments	110
Man-Made Features in Natural Settings	112
Other Affective-Arousal Responses to Natural versus Urban Visual Environment	113
Visual Landscapes and Psychophysiological Restoration: A Tentative Perspective	116
Summary and Directions for Research	117
References	120

CHAPTER 4

THE ROLE OF NATURE IN THE URBAN CONTEXT

RACHEL KAPLAN

Introduction	127
Growing Awareness of Urban Nature	128
Indirect Evidence	130
Preference for Urban Nature: Content and Process	132
The Urban Environment: Perceptual Categories	133
Content and Process as Predictors	137
The View from Home	139
Kinds of Nature	140
Does the View Matter?	144
Satisfaction from Urban Nature	146
Satisfaction without Active Use	147
People-Plant Relationship	148

Gardening Satisfactions	150
Organic versus Chemical Fertilizers	152
Urban Nature and Quality of Life	153
Human Needs and the Natural Environment	153
Participation	155
Search and Research	157
References	159

CHAPTER 5

PSYCHOLOGICAL BENEFITS OF A WILDERNESS EXPERIENCE

STEPHEN KAPLAN
JANET FREY TALBOT

Introduction	163
Research on Wilderness Values	164
Research on the Impacts of Wilderness Experiences	167
Remaining Questions	168
A Closer Look at the Wilderness Experience: The Outdoor Challenge Research Program	168
Program Description and Methodology	170
Questionnaire Results: Changing Reactions to Wilderness	174
Analysis of Wilderness Journals: Exploring Processes, Searching for Mechanisms	176
Time Course of the Experience	177
Psychological Dimensions of the Wilderness Experience	179
Returning to Civilization	181
Areas of Theoretical Interest	186
Being Away	187
Fascination	188
"Other Worlds" and the Concept of Coherence	189
Action and Compatibility	190
The Emergence of Psychological Benefits	191
The Progression of Response to Wilderness	192
The Contents of Contemplation	193
Concluding Comments	195
A Perspective on Restorative Environments	195
Does the Natural Environment Make a Difference?	197
Wilderness and Human Nature	200
References	201

CHAPTER 6

RECREATIONAL NEEDS AND BEHAVIOR IN NATURAL SETTINGS

RICHARD C. KNOFF

Introduction	205
Recreation, Nature, and Expected Outcomes	206
The Evolution of Inquiry	206
The Recreationist as a Purposive Actor	211
The Actor Needs More Study	225
Conclusion	232
References	232

CHAPTER 7

AFFECTIVE, COGNITIVE, AND EVALUATIVE PERCEPTIONS OF ANIMALS

STEPHEN R. KELLERT

Introduction	241
Basic Attitudes toward Animals	243
The Special Case of Hunting	251
Knowledge of Animals	254
Attitudes toward Animal-Related Issues and Problems	256
Symbolic Perceptions of Animals	260
Policy and Management Implications	262
References	265

CHAPTER 8

SOCIAL AND BEHAVIORAL ASPECTS OF THE CARRYING CAPACITY OF NATURAL ENVIRONMENTS

WILLIAM R. CATTON, JR.

The Multidimensioned Environment–User Relationship	269
Carrying Capacity Exceeded: Two Examples	272
Easter Island	272

St. Matthew Island	274
Differences and Similarities	275
Penchant for Discounting Ecological Omens	276
Conceptual Development	278
Highlights of the Idea's Emergence	278
Components of Carrying Capacity	280
Further Basic Considerations	283
Recreational Carrying Capacity	285
Anthropologists and Carrying Capacity	292
Future Directions of Research	293
<i>Homo colossus</i> : The Per Capita Impact Dimension	294
Trade and Air-Conditioning: The Deficiency Dimension	295
Diachronic Competition: The Time Dimension	297
Avoidance of Overstocking: The Degradation Dimension	298
References	301

CHAPTER 9

CONTRIBUTIONS OF BEHAVIORAL SCIENTISTS TO RECREATION RESOURCE MANAGEMENT

BEVERLY DRIVER
PERRY J. BROWN

Introduction	307
Skills Needed by Recreation Policymakers and Managers	309
An Applied Perspective	310
Policy and Management Issues Related to Behavioral Research	312
Producing and Measuring Use of Recreation Opportunities	313
Producing and Measuring Recreation Experiences	327
Producing and Measuring Recreation Benefits	329
Reducing and Measuring Adverse Impacts	332
References	333
INDEX	341